

REGIONAL COOPERATION FOR MANAGING MARINE FISH STOCKS IN THE APFIC REGION

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Abstract

For effective management of straddling fish stocks, regional cooperation of the participating countries is required. Formation of regional fisheries forums and intergovernmental consultative machinery's is very vital. The functions of the existing regional bodies and the factors which should form the basis for effective management of fish stocks are discussed.

INTRODUCTION

The production of small pelagics, in general, has increased in the APFIC region during the past 4 decades. Technological advancements in fishing craft and gears (for e.g., in India, Thailand and China), the discovery of new fishing grounds (for e.g., in the Gulf of Thailand) and the increase in the number and efficiency of fishing fleet in all the member countries during the past 4 decades are the major reasons for the increase in the landings. However, barring Japan and Australia, the fishery has developed without effective national and international management policies in the region. Most of the member countries have now realized that the stocks of many small pelagics are on the decline and hence are taking serious steps to assess and overcome the hurdles in implementing fisheries management. It is being increasingly realized that for the management of the marine fisheries resources, international cooperation through regional organizations has a particularly important role to play. Management of marine fish stocks, especially the straddling stocks, is necessary at the regional level, that is at a scale greater than national, but less than global in scope. The concept of a region, long applied by geographers to the terrestrial portions of the earth, is now applicable to the oceans (Hayashi, 1995). Management action on a transboundary stock taken by only one country on a part of its life cycle without cooperation of other parties involved in the exploitation of that stock would be futile, resulting in eventual depletion of that stock (Anon., 1996).

IMPORTANCE GIVEN TO REGIONAL COOPERATION IN RIO DECLARATION

Considering that the traditional concept of MSY is no longer adequate in any one particular geographical area, especially for the straddling stocks, the Rio Declaration of the United Nations Conference on Environment and Development (UNCED) adopted an agreement on precautionary approach to apply widely, both in the areas of national jurisdiction and the high seas. The agreement: (i) requires the

coastal countries and other countries fishing in the highseas to cooperate for the purpose of achieving compatible conservation and management measures in respect of the stocks concerned, (ii) stresses the biological unity and other biological characteristics of the stocks and the relationships between the distribution of the stocks, their fisheries and the geographical particularities of the region concerned; (iii) requires the coastal countries and other countries fishing in the adjacent highseas to inform each other of the areas under their national jurisdiction and for the highseas, respectively; (iv) stresses the need to make every effort to enter into provisional arrangements of particular nature (Hayashi, 1995), which could be made by the countries either directly or through regional organizations; and (v) attaches great importance to the role of regional fisheries conservation and management organisations. Where a competent regional organization already exists, the countries concerned shall cooperate by becoming members of such organizations and/or by agreeing to apply the management measures established by such organizations. Only those states which become members shall have access to the fisheries resources of the region. With respect to the regions where no such organization exists, the agreement obliges relevant countries to cooperate and establish such an organization and participate in its work.

REGIONALIZATION OF MARINE AREAS

Regionalizing the oceans is not a new idea; the Pacific, Atlantic and Indian Oceans are large geographic areas recognized as distinct marine regions for centuries. The concept of small regions or subregions of the oceans such as the South China Sea, Gulf of Thailand and Bay of Bengal is gaining considerable importance from the point of view of managing the fisheries resources. However, it is somewhat difficult to delineate the regions precisely as there is no characteristic homogeneity within any region. In spite of this difficulty, management of marine fisheries resources calls for close cooperation among the countries of a region, which are analogous in many respects (Morgan, 1994). The Third United Nations Conference on the Law of the Sea (UNCLOS III) believes that it is not necessary, and further, it is inconvenient, to make efforts to define a region very precisely. Any kind of cooperation developed by the concerned countries in a given part of the ocean is regional, without considering whether the marine area involved in cooperation has features that justify regarding it as a region (Vallega, 1994). The areas in the APFIC region, for instance, vary greatly in physical and environmental conditions. The region encompasses typical tropical, temperate and near-polar areas. The littoral and island countries in the South Asian region are generally characterized by very high population density, low to very low per capita income, vast hinterlands that generate substantial agricultural production, extensive freshwater and brackish water resources with significant aquaculture potential and increasing industrial growth. On the other hand, the oil producing countries around the Persian Gulf are generally characterized by very high per capita income and availability of only a restricted hinterland for agricultural production, but very high growth of oil-based industries. A third category is the highly industrial countries such as Japan and Korea. In addition to these differences in the economic status of the countries in the APFIC region, there are also diversities in political philosophy, governmental set up, ethnicity, culture, religion and food habits between the

countries. It is against these national and regional settings, one has to look for the prospects of fostering regional cooperation between the member countries for the development and management of fisheries in both the inshore and offshore areas of their exclusive economic zones.

FACTORS TO BE CONSIDERED FOR REGIONAL COOPERATION

Notwithstanding its undoubted advantages, the development of marine regional cooperation is a complex and difficult process. It is essential to view regional cooperation in marine fisheries in the wider context of the entire economy, and in relation to the priority ratings given by the member countries. The need for regional cooperation for economic objectives is being increasingly felt all over the world, particularly by the third world; however, the problems of bilateral or regional nature hinder rapid progress in spite of national aspirations towards this cause. Several countries which are not members of any regional organization, are not bound by the code of conduct for fishing. There is an increasing trend by fishing vessels evading management regimes by reflagging their vessels to flags of the countries which are not members of an international fisheries organization (Anon., 1993). This means that they can continue fishing in the areas beyond the EEZ without having to comply with the regulations set by the international bodies for their members. Hence, the viability of the entire system of conservation is being threatened. Management at regional level, to be effective, will have to be political, and *tangible support among the participating countries is required*. Land-based cooperation is a prerequisite for marine oriented regionalism. The state of affairs in the APFIC region to foster regional cooperation for marine fisheries are discussed below.

(i) The fish stocks, which are being shared between countries, need to be identified together with their stock areas. Determination of migratory routes and patterns, spawning season and frequency and stock abundance is very vital for the management of shared stocks. However, information on these aspects is lacking or inadequate in respect of many of the stocks. The FAO/SEAFDEC workshop on shared stocks has identified 40 stocks as being shared by two or more countries in the Southeast Asia (Anon., 1985). Devaraj and Vivekanandan (1997; this volume) have provided a list of probable shared stocks in the other areas within the APFIC region. It is important that a complete list of stocks that are shared by two or more countries in the APFIC region is prepared.

(ii) There is an urgent need to integrate national research efforts into a cooperative programme for the assessment of major stocks exploited by the member countries in the APFIC region to determine the total allowable catch (TAC) which may be shared by the concerned countries on an equitable basis. Every maritime country should undertake cooperative research and investigations with the neighbouring countries in the areas of common interest. Research institutions in marine fisheries and oceanography in these countries should be fully equipped to handle this task. Once the TAC is determined for the EEZ and the international waters of each marine region, there should be appropriate national and regional strategies for realising the target yields.

(iii) Whereas adequate capabilities exist in several countries in the APFIC region to generate optimum yields from the territorial seas, capabilities of many countries are inadequate for areas beyond the territorial seas. This has resulted in poaching close to or within the territorial seas. Apparently, the poaching vessels do not have the knowledge of abundance of the resources. The future of the development of high seas fisheries in the region would depend on the identification of resources of high enough abundance for commercial operations. Hence, there is need for proper assessment of the profitability of exploiting the high seas resources prior to the commencement of commercial fishing ventures.

(iv) Commercial fishing ventures should consider the possibility of regional joint ventures between countries possessing the fishery resources, but lacking in capital and technology and those possessing surplus fleet capacity. In all the proposals for joint ventures, intra regional tie-ups should be preferred to tie-ups with countries from outside the region.

(v) The immediate challenge arising from the agreements on regional cooperation is the surveillance of the economic zones for the protection of the resources, for which many of the countries do not possess the requisite capabilities. Therefore, it may be worthwhile to pool and share whatever national facilities exist for offshore surveillance and protection on a common basis, and share the cost on an equitable basis. It would be advisable to take into consideration the facilities available among the participating countries and evolve a suitable operational arrangement within the regional framework.

(vi) Another important area where cooperation could be of great help is in respect of post-harvest technology and marketing among the APFIC countries. The post-harvest and marketing strategies have developed in 3 distinct ways in the APFIC region (Devaraj and Vivekanandan, 1997; this volume). In India and Sri Lanka, the small pelagics are consumed mostly in fresh condition or sundried and there is scope for these countries to develop suitable post-harvest technologies for the production of value added fish and fish-based products. On the other hand, the Southeast Asian Countries have developed a number of value added products from the small pelagics. In the third category, Australia and Japan use a large portion of the small pelagics as fish meal. It is essential that all these countries coordinate with each other and launch upon joint programmes within the region to convert the low value species into value added products for direct human consumption by making use of the available expertise.

(vii) Establishment of priorities as well as the urgency of the needs is essential if limited resources in terms of funding, staff and facilities have to be used to the greatest advantage. The logical step is to provide access to the needy countries, under procedural arrangements with those possessing the competence. Funding seems to be a major constraint for the implementation of identified opportunities, and this applies to both national governments and international agencies. Although certain basic funding can be met from within the normal national budgetary processes, there may be extraneous costs, usually involving

foreign exchange, which present particular funding constraints at the national level.

Therefore, cooperation in such important supporting services like banking will be a prerequisite to sustain not only fisheries development, but the regional economy as well. A regional investment bank may be expected to play a major role in financing small and medium projects of mutual interest in all economic spheres including fisheries. It is suggested that the formation of a regional bank may be initiated with an initial capital, which could go up subsequently through subscriptions from extra-regional sources as in the case of the Asia Development Bank. A regional investment institution will have a better credit rating, and may thus be in a position to make bond issues or arrange syndicated loans from international capital markets on better terms than that from the national entities. In any event, an investment corporation would be a useful instrument for giving ideas for regional cooperation a concrete bankable form (Mukerjee, 1980). Until such time when a regional banking institution is established, supportive international aid agencies could assist by providing funding or topping up money to cover areas of financial deficit. An ongoing need for supportive funding in fisheries is clearly seen by the Eastern Indian Ocean and Western Central Pacific countries. Therefore, withdrawal or non-availability of such funding will seriously jeopardize current cooperative efforts within fisheries, and will undoubtedly slow down the development process as a whole unless replaced by alternative input arrangements such as a regional bank.

INTERNATIONAL ORGANIZATIONS IN THE APFIC REGION

For identifying the important opportunity areas (a few of which have been outlined above) and for implementing the identified programmes, a suitable machinery comprising the representatives of all the participating countries has to be established. The machinery's role should include primarily: (i) mechanisms for the identification of projects in which all the member countries would participate and those in which cooperation could be bilateral or trilateral; (ii) formulation and implementation of projects; and (iii) funding arrangements. For the purpose of project identification, the machinery could request the member countries to prepare twin and complementary lists which identify the needs and their priority on the one hand and competence on the other.

Besides the research, development and management network in the individual countries, there are several international organizations in the APFIC region which assist and coordinate national and international programmes in fisheries development, promote regional research activities and examine management problems. These organizations include the APFIC for the entire Asia-Pacific region; the Indian Ocean Fishery Commission (IOFC) and the Indian Ocean Tuna Commission for the Western and Eastern Indian Ocean; the Bay of Bengal Programme for the Eastern Indian Ocean; the Fisheries Forum Agency (FFA), the Southeast Asian Fisheries Development Center (SEAFDEC), the International Center for Living Aquatic Resources Management (ICLARM) and the South Pacific Commission (SPC). Although there is no regional fisheries organization in the Northwest Pacific, various bilateral agreements exist. PICES is the forum for communication among fishery scientists from the whole North Pacific. All these

promotional bodies play only advisory roles, and do not have any regulatory powers.

For the effective implementation of any integrated and coordinated policy on regional cooperation, an intergovernmental consultative machinery is important in addition to the international bodies. This machinery will have to meet periodically to formulate, establish and supervise the implementation of the policy guidelines. Such consultative organizations and regional fisheries forums could jointly coordinate regional multilateral and bilateral programmes and thereby eliminate wasteful duplication by national and international institutions (Kwiatkowska, 1990). At present, the Southeast Asian and other areas in the Indian Ocean are provided with the possibility of realizing such consultative and coordinating functions, including fisheries through collaborative activities within the framework of the Indian Ocean Marine Affairs Cooperation Conference (IOMAC), which is an organization functioning outside the United Nations system. Other areas in the APFIC region lack such intergovernmental consultative organizations. The overall concept of the IOMAC in implementing an integrated ocean policy (including the living resources) is identified in the following five major stages (Kwiatkowska, 1990): (i) Promoting awareness, assessment and plan, (ii) training, (iii) establishment of organizations, (iv) basic institutional support, and (v) direct country support. In the wider and nonhomogeneous regions such as the Indian Ocean, the ultimate achievement of the objectives is expected to occur first in the subregions and subsequently on a longer perspective in the entire region.

In addition to the international bodies and intergovernmental machinery's, there are several intergovernmental agreements within the region. (i) Following the joint venture fishery arrangements in the development area between Thailand, Malaysia and Indonesia under the new Economic Triangle, or IMT-GT (Indonesian-Malaysian-Thailand Growth Triangle) Project, which covers the northern Malacca Strait, increased catches in the area are expected. (ii) The excess fleets of Thailand exploit the waters of the neighbouring countries through various bilateral agreements. (iii) Within the terms of an Australian-Indonesian memorandum of understanding, the Indonesian fishermen continue to operate in an offshore area adjacent to the Kimberly coast (the most eastern part of the Indian Ocean). (iv) Indonesia provides fishing access to foreign fleets 18 km off the archipelago primarily in the South China Sea and on the Pacific side. (v) Fishermen from Japan and New Zealand have been granted fishing rights in the Australian waters through bilateral agreements. (vi) As the stock of the southern bluefin tuna is limited and heavily exploited, a regional initiative involving Japan, Australia and New Zealand in the joint management of this stock has been established. (vii) With the termination of the Indo-Pacific Tuna Programme (IPTP), the cooperation in tuna fisheries between the member countries will be accommodated within the framework of the Indian Ocean Tuna Commission (IOTC) which covers all the countries bordering the Indian Ocean and the non-coastal countries fishing in the Indian Ocean (Anon., 1995). (viii) France, Spain, Taiwan, Republic of Korea and Japan exploit tuna and tuna-like fishes in the Western Indian Ocean. (ix) In the Persian Gulf, special committees have been set up for the management of fish stocks, particularly the Indian Ocean tuna. (x) Among the Northwest Pacific

countries, 5 bilateral fishery agreements currently exist through which management of the shared stocks is partially conducted (Anon., 1992). (xi) India relied on a system of licensing international vessels on charter and on joint venture basis in the 1980s and the 1990s, but could not make much headway due to internal resentment.

Many of the international bodies and intergovernmental agreements mentioned above have a number of characteristics required for a regional organization and hence are in a position to help their member countries implement some of the management programmes. These organizations can transform into a regional fisheries forum where the roles played by the member countries could be coordinated.

As there are several regional bodies which would result in heavy expenditure on establishment and possible duplication of effort, it was agreed in 1972 by the International Coordination Committee of the IOFC that proliferation and duplication of international bodies was undesirable (Anon., 1972). Hence, serious consideration should be made by the countries in the region as to whether a new regional forum should be developed or the existing bodies enhanced (Anon., 1996). However, all the countries are not members of the same organization. Furthermore, many of these organizations and participating countries are facing financial crunch and hence forced to observe austerity. Taking these problems into account and noting that a number of countries in the region do not prefer, at this stage, to consider setting up a new regional mechanism or upgrading an existing mechanism, the FAO proposed (i) strengthening the activities of the APFIC and (ii) establishment of a joint secretariat working/party with a view to reinforcing technical cooperation among the concerned organizations (Anon., 1996).

POSSIBLE METHODS OF IMPLEMENTING REGIONAL COOPERATION

The following principles and guidelines should be taken into account by the regional fisheries forum while examining the changing needs for international collaboration and for charting the roles of the member countries (Marashi, 1996): (i) Objectives of international cooperation should include contribution from all the parties involved on the basis of their experience and capacity, leading to the enhancement of national capabilities and transfer of technology. (ii) Cooperative research efforts and technical cooperation should have clearly identified objectives, responsibilities and deadlines. (iii) Central collection and analysis of data from all fleets fishing a common resource. (iv) Adequate financial resources, other resources and technical support should be provided to support regional bodies. There is thus an urgent need to mobilize much greater funds for regional cooperation. As soon as possible, developing countries should increase their participation and commitment to the technical support of such bodies as well as take full responsibility for the management. (v) Where appropriate, closer collaboration should be established between the FAO regional fisheries bodies and projects on the one hand and regional economic groupings and organizations concerned with fisheries on the other.

By and large, many developing countries in the APFIC region lack the expertise in integrated fisheries policy making and management. Regional organizations can play an important role in overcoming the drawbacks of the developing countries. The implementation of various national fisheries management schemes will be expensive, but the costs and implementation can be reduced substantially through suitable regional cooperative effort (Anon., 1996). These include the conduct of cooperative management research on fish stocks particularly those that are commonly exploited and the development of suitable stock assessment techniques applicable to the multigear, multispecies situation. Regional cooperation can play an important role in the transfer of technologies commonly required by the countries in the region, human resources development and capacity building for proper management and development of fisheries. Realising the nature of distribution of the resources, the high cost of their management and the technological capability that is required, the report by the Commonwealth Expert Study Group on Maritime Policies which was set up by the Commonwealth Heads of Governments of Asia Pacific region concluded that regional cooperation is the most viable method for achieving the optimum potential benefits of the oceans.

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